

REMARKS

Claims 1-10 are currently pending in the present application. Amendments have been made to the specification to correct typographical errors.

Claim Rejections Under 35 U.S.C. § 103

Claims 1-10 have been rejected under 35 USC § 103(a) as being unpatentable over U.S. Patent No. 6,522,762 to Mullenborn, et al. (Mullenborn) in view of U.S. Patent No. 6,593,870 to Dummermuth, et al. (Dummermuth) or U.S. Patent No. 3,778,561 to Reedyk (Reedyk). Applicants respectfully traverse this rejection for the reasons below.

To establish a *prima facie* case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, and not based on applicant's disclosure. *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991).

Mullenborn is silent about an amplifier that is adapted to receive an unbalanced first electrical signal so as to generate a differential (balanced) electrical signal, as required by claim 1. Although Dummermuth appears to disclose an amplifier, Dummermuth fails to disclose an amplifier that is adapted to generate a differential (***balanced***) electrical signal in response to an unbalanced first electrical signal, as required by claim 1. Rather, Dummermuth discloses a amplifier 708 that generates two unbalanced intermediate signals 709a and 709b based upon a comparison of a position signal 110 with a reference value 112 representative of a reference position of a beam element. *Dummermuth*: FIG. 7 and col. 5, ln. 7-11. Accordingly, the combination of Mullenborn and Dummermuth fails to disclose every limitation of claim 1.

Similarly with regard to Reedyk, although Reedyk appears to disclose an amplifier, Reedyk fails to disclose an amplifier that is adapted to generate a differential (balanced) electrical signal in response to an unbalanced first electrical signal, as required by claim 1. Rather, Reedyk teaches that “identical piece parts may be used for the two electrodes” so that the transducer may be “*balanced* against external electrical interference because of its symmetrical structure.” *Reedyk*:

col. 1, ln. 62-65. Reedyk also teaches that any unbalance may be additionally compensated by using a *balanced* circuit including capacitive elements 36 and 37 and resistance elements 32 and 33. *Reedyk*: FIG. 4 and col. 4, ln. 3-4 and 16-19. Reedyk teaches that the “balanced circuit” is distinct from the amplifier. *Reedyk*: col. 3, ln. 27-28 (“external circuit . . . *and* amplifier means”), col. 4, ln. 3-4 (“balanced circuit *and* a differential amplifier”), claim 1 (“external circuit”), and claim 4 (“*further* comprising a differential amplifier”). Therefore, Reedyk teaches an amplifier that receives a pair of *balanced* input signals so as to generate a pair of output signals. In contrast, claim 1 requires an amplifier adapted to receive an unbalanced first electrical signal so as to generate a differential (balanced) electrical signal. Accordingly, the combination of Mullenborn and Reedyk fails to disclose every limitation of claim 1.

Additionally, one of ordinary skill in the art would not be motivated to combine the teachings of Mullenborn with that of Dummermuth or Reedyk. For example, Mullenborn teaches a silicon-based sensor system, including a MEMS microphone. In contrast, although Dummermuth employs a MEMS, Dummermuth teaches using the MEMS in an analog-to-digital converter to generate a digital output signal based on an analog input signal, wherein the digital output signal is electrically isolated from the analog input signal. *Dummermuth*: col. 7, ln. 14-17. Additionally, Dummermuth teaches that the amplifier 708 is separate from the MEMS 102. *Dummermuth*: FIG. 7. Reedyk is silent regarding MEMS microphones and, instead, teaches an electret microphone, which is known by those skilled in the art to involve manufacturing techniques incompatible with that of MEMS microphones. Applicants would like to note that any teaching or suggestion to make the claimed combination and any reasonable expectation of success must both be found in the prior art, and not based on an applicant’s disclosure. *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991). Accordingly, Applicants maintain that one of ordinary skill in the art would not be motivated to combine the teachings of Mullenborn with that of Dummermuth or Reedyk.

At least for the above reasons, a *prima facie* case of obviousness cannot be established with regard to claim 1. Consequently, a *prima facie* case of obviousness cannot be established with regard to claims 2-10 by virtue of their dependency on claim 1. Accordingly, Applicants respectfully request the Examiner to withdraw the above rejection.

CONCLUSION

In view of the above, Applicants respectfully request the reconsideration and allowance of all of the pending claims. Should there be any matters that need to be resolved in the present application, the Examiner is respectfully requested to contact the telephone number of the undersigned below.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 08-0750 for any additional fees required under 37 C.F.R. § 1.16 or under 37 C.F.R. § 1.17, particularly extension of time fees.

Respectfully submitted,

HARNESS, DICKY, & PIERCE, P.L.C.

By: 

John A. Castellano, Reg. No. 35,094
P.O. Box 8910
Reston, Virginia 20195
(703) 668-8000

JAC/ACC:lmg
Acc.